

## ABSTRACT OF THE DISCLOSURE

[0050] The present invention generally relates to a communication protocol converter to allow a legacy device utilizing IPv4 to operate across the network using IPv6. In a first embodiment of the invention, two modular Ethernet connectors are placed side-by-side. A first modular connector receives IPv4 Ethernet data which is converted to a raw data signal. The data is transmitted from the first modular connector to a second modular connector by a bidirectional data line. The second connector receives the raw data, and a raw data-to-Ethernet conversion is completed providing output at IPv6. The present invention utilizes the form factor structure of the Ethernet connectors, so that the entire electronic circuitry is contained within the connectors to complete the conversion. An alternate embodiment incorporates the connectors into a single housing and the conversion is completed internally by a microprocessor and embedded software. A method of IPv4 to IPv6 conversion is additionally disclosed.